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POLY

Resurrection Fern
(Polypodium polypodioides)

Resurrection Fern (Polypodium polypodioides)

- True epiphyte
  - Lives on trees
  - Not a parasite
  - Makes its own food
  - Whole plant absorbs water
  - Roots anchor fern to surface of tree
- Common in South Carolina forests

Resurrection Fern

Called *Resurrection Fern* because of behavior during drought

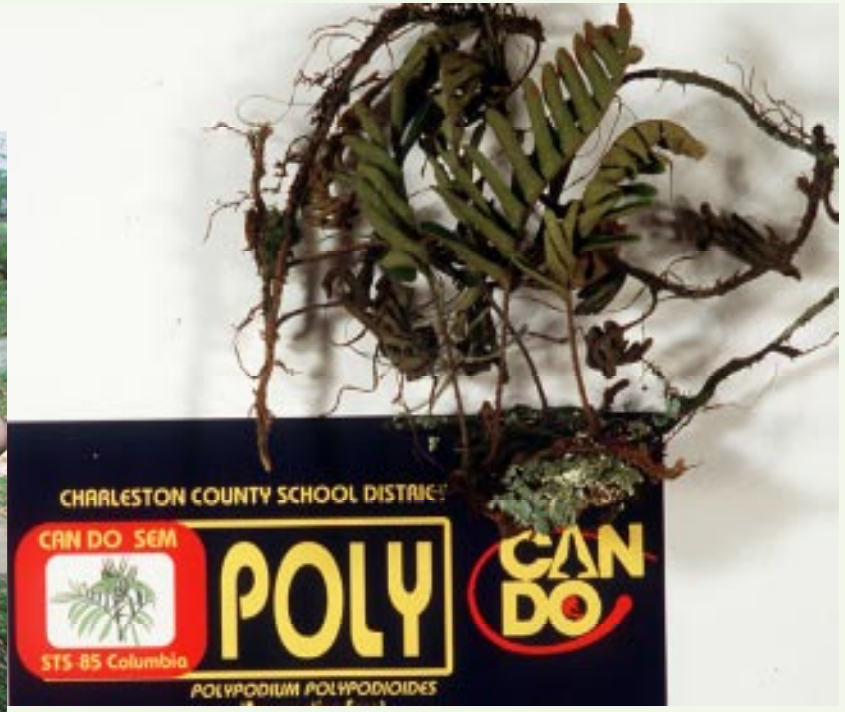
- Curls up and appears dead when dry
- Quickly revives after rain

Experimental Question

Will Polypodium polypodioides revive in space after prolonged dryness with the application of water, CO^2 and light ?

POLY


CAN DO


CHARLESTON COUNTY SCHOOL DISTRICT
CAN DO SEM
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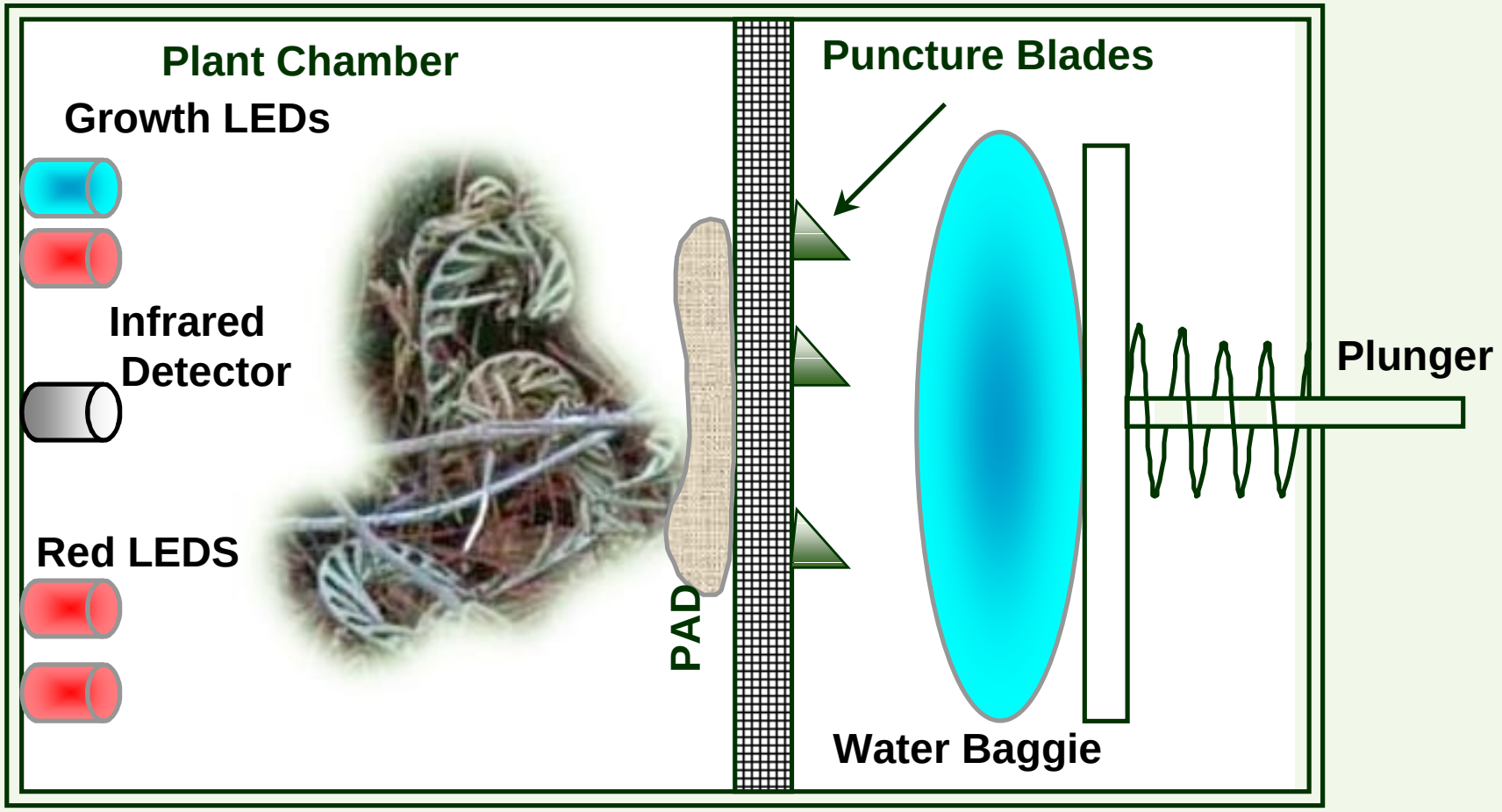
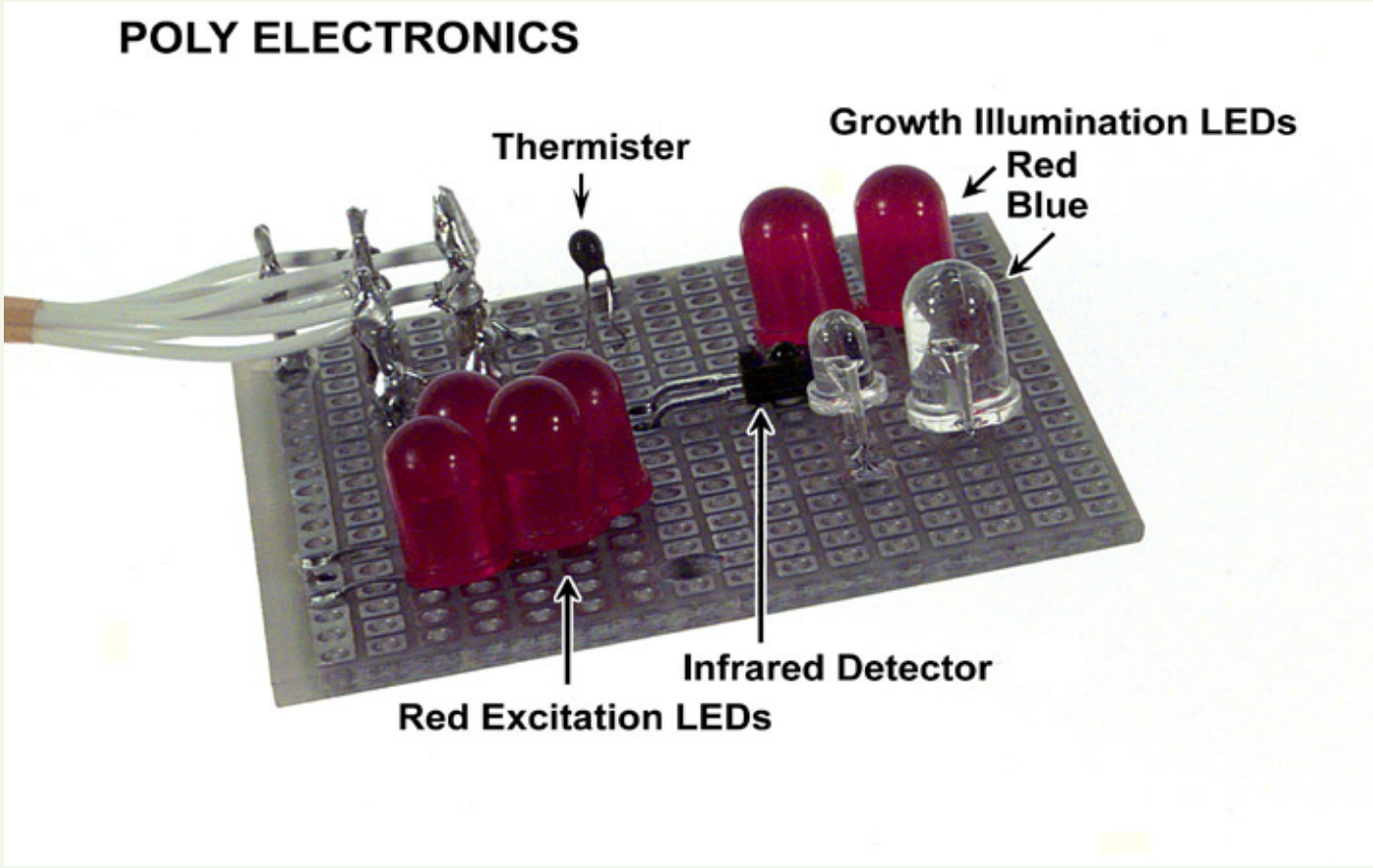
POLYPODIUM POLYPODIOIDES

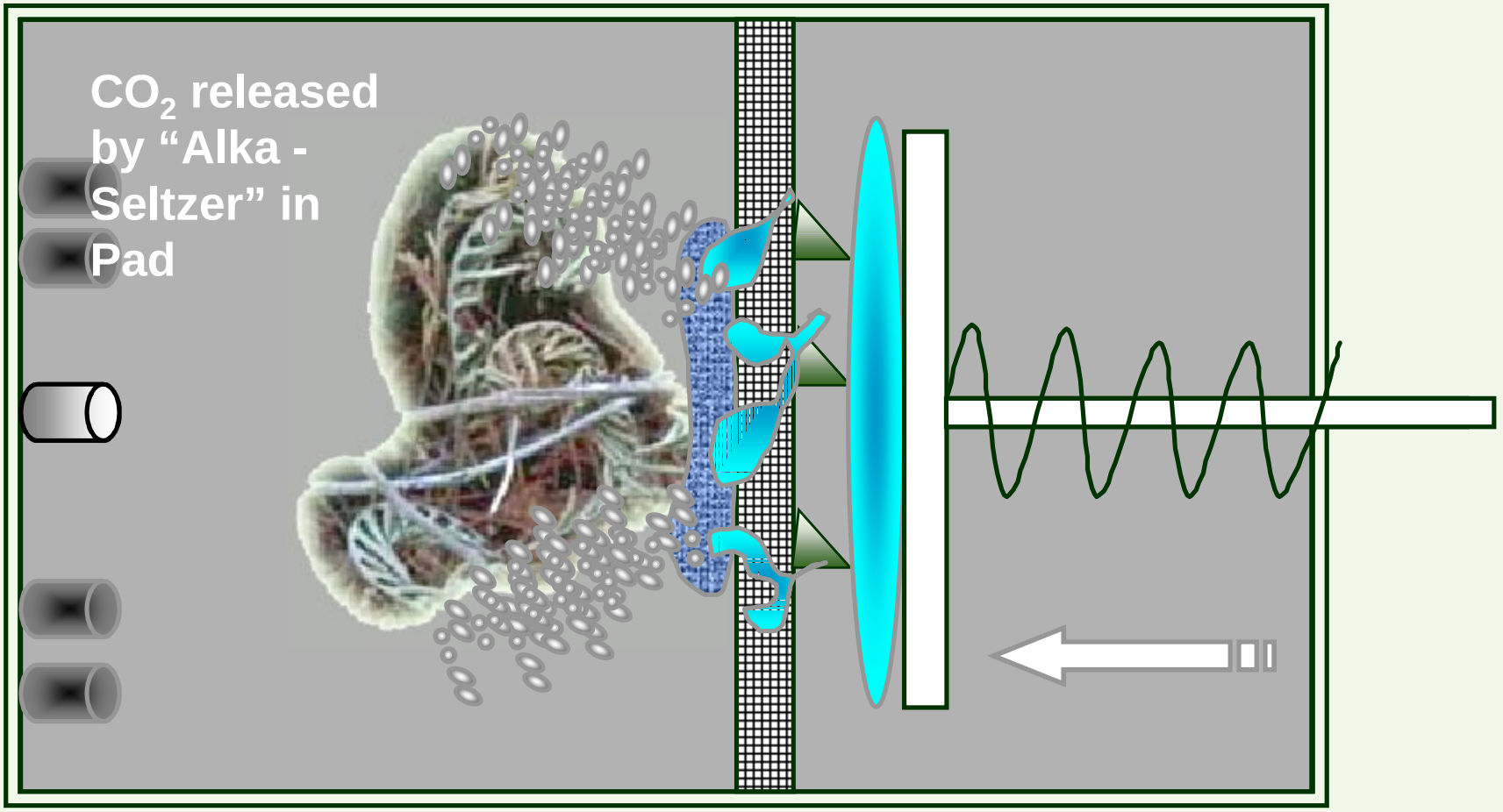
POLY Apparatus



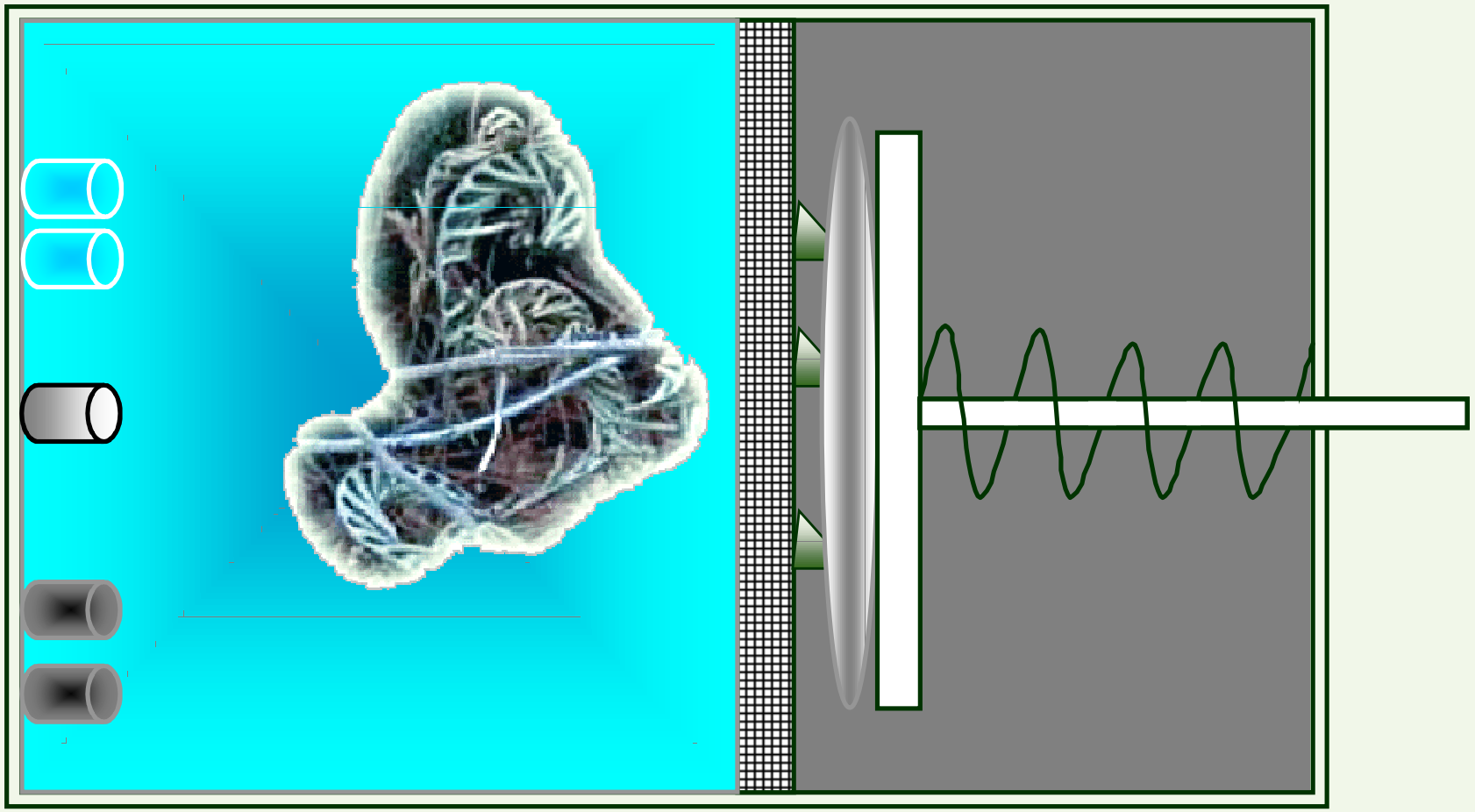
POLY Electronics

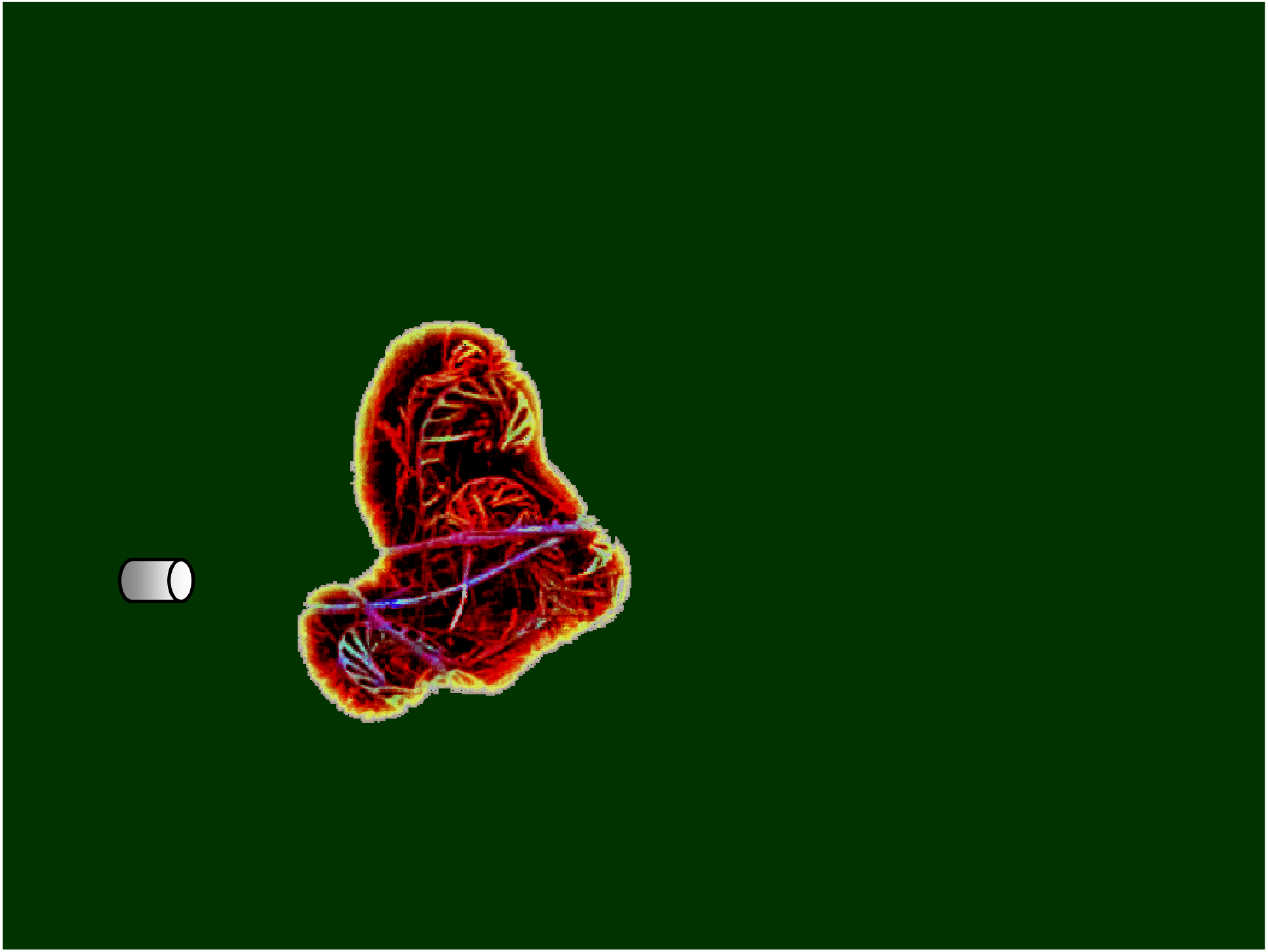


1. Water & CO^2

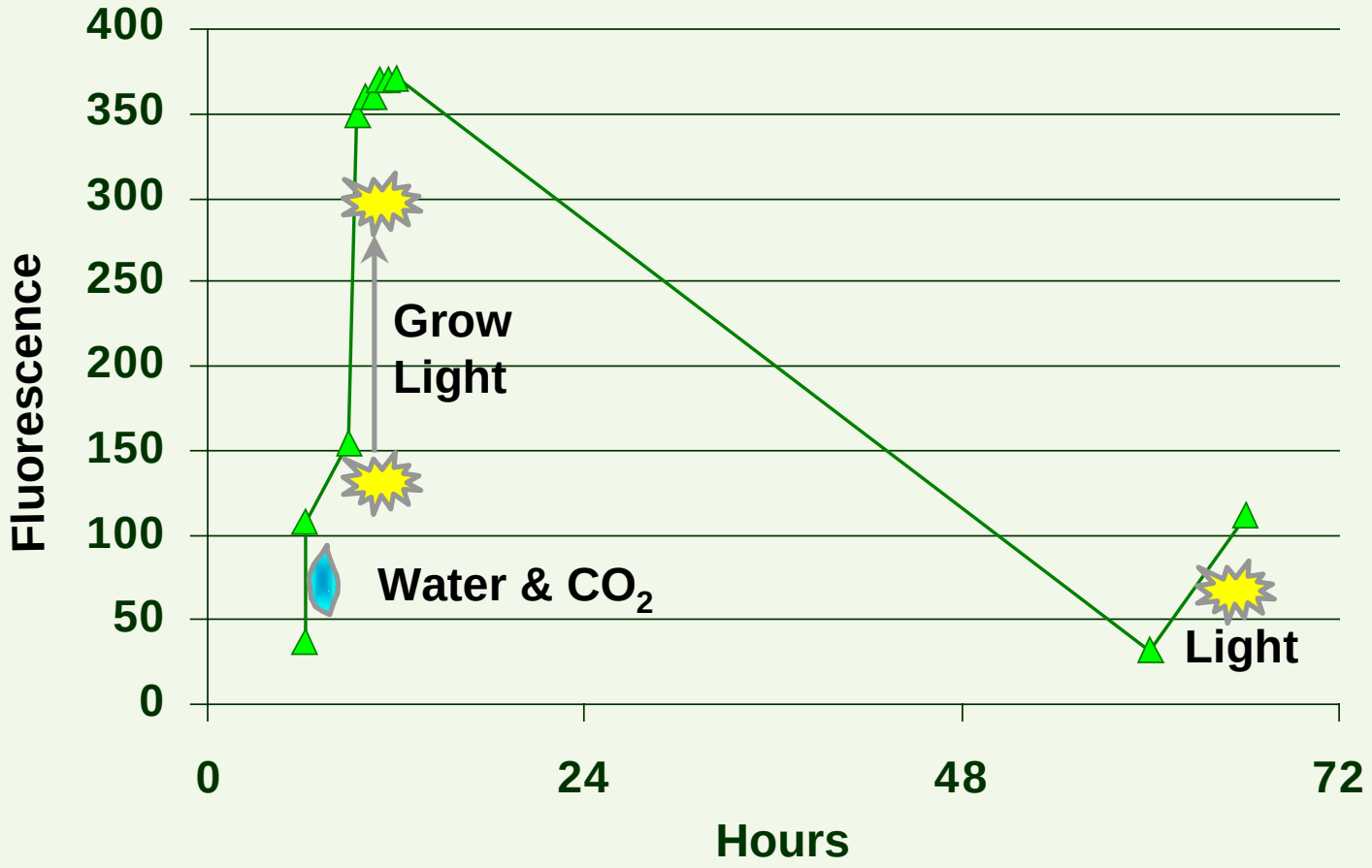


2. Grow light





Chlorophyll Fluorescence



Results

- Post flight inspection showed apparatus worked correctly
- The photo transistors measured fluorescence after water and light were applied
- The fluorescence faded in the absence of light and reappeared when growth light was reapplied

Conclusion

- The plant began production of active chlorophyll after receiving water and light stimulation
- The plant did in fact “resurrect” in space

Thank You

For further information,

www.musc.edu/cando